

## REMARKS

Claims 17-22 are pending. Claims 17 and 22 are amended above.

Claims 17-22 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over Johnson et al. (US 5,963,146) in view of Suzuki et al. (US 5,892,912) and further in view of Martinez. The rejection appears to be based on two arguments: (1) that the claimed “grouping together of a plurality of nodes” and “grouping together a plurality of gateways” are “not recited in the claim in such a way as to imply the embedded functionality of the server” (Office Action, p. 5); and (2) “[a]s per grouping together a plurality of nodes and gateways to implement the non-interfering data transfer, the combination does, in fact, teach said feature” (Office Action, p. 6). The applicants respectfully submit that the Office Action is incorrect on both grounds.

**(1) The functions of “grouping together a plurality of nodes to define groups of noninterfering nodes” and “grouping together a plurality of gateways to define sets of noninterfering gateways” are positively recited in claim 17 and must be accorded patentable weight.**

In rejecting claim 17, the Office Action asserts that the “functionalities’ recited in the claim are not positively claimed, but introduced into the claim via a ‘wherein’ clause,” citing MPEP 2106 (II) (C). The Office Action further quotes from this MPEP section to assert that “[l]anguage that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation.” In addition, the Office Action cites *Ex parte Masham*, for the proposition that “[a] claim containing a ‘recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus’ if the prior art apparatus teaches all the structural limitations of the claim (Office Action, p. 4). Together, these assertions suggest that the Examiner does not believe that the functional recitations in claim 17 should be given patentable weight. But that is an incorrect application of the law.

First, with respect to the term “wherein,” the applicants’ use of the term was not in any way meant to suggest that any of the functionality recited after that word was optional. Indeed, the applicants went out of their way to positively recite the functionality performed

by the server, using affirmative verbs such as “is interfaced,” “stores” and “groups.” Nevertheless, to the extent that the Examiner believes that the word “wherein” makes those functions somehow optional, the applicants have amended claim 17 to remove the word. There should be no doubt that these functional limitations are positively stated.

As for the citation to *Ex Parte Masham*, that case deals with the situation where the only recitation of anything other than structure is a recitation of an “intended use.” That is not the case here. The functions of the server recited in claim 17 are not mere statements of intended use. On the contrary, they are affirmative statements of the functionality of the server. And there is nothing improper about reciting functional features in an apparatus claim.

As the Federal Circuit decision in *In re Schreiber* (cited in the MPEP § 2106(II)(C)) makes clear, “[a] patent applicant is free to recite features of an apparatus either structurally or functionally.” *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997) (emphasis added) (citing *In re Swinehart*, 58 C.C.P.A. 1027, 439 F.2d 210, 212, 169 U.S.P.Q. (BNA) 226, 228 (CCPA 1971) (“There is nothing intrinsically wrong with [defining something by what it does rather than what it is] in drafting patent claims”). Thus, the functions of the server recited in claim 17 must be given patentable weight; they cannot be ignored. The applicants respectfully submit that the prior art does not teach those features.

**(2) The prior art does not teach or suggest a server that “group[s] together a plurality of nodes to define groups of noninterfering nodes” and “grouping together a plurality of gateways to define sets of noninterfering gateways”**

In addressing the applicants’ prior remarks at the end of the Office Action (p. 6), the Examiner states that “[a]s per grouping together a plurality of nodes and gateways to implement the non-interfering data transfer, the combination does, in fact, teach said feature (see discussion above).” The only “discussion above” in the Office Action concerning the claimed grouping feature is the statement that “Johnson explicitly addresses the interfering problem and provides a solution to avoid said problem (C. 8, L. 33-42; C. 9, L. 7-21)” (Office Action, p. 3). The applicants submit that this cited portion of Johnson does not at all teach or suggest the claimed grouping feature.

The cited portion of the Johnson reference does recognize the potential for interference when multiple meters transmit data on the same channel. However, it does not

solve the problem by grouping nodes to define “groups of noninterfering nodes” and “sets of non-interfering gateways” and then “broadcasting a request for meter data sequentially to each group of non-interfering nodes,” as claimed. Rather, as described in the cited portion, Johnson attempts to solve the interference problem by having each meter introduce a random delay before transmitting, so that not all of the meters transmit at the same time. *See*, col. 8, ll. 39-42 (“[a]larm signals may be transmitted several times with random delays. This avoids interference among alarm messages if many alarms occur simultaneously....”) and col. 8, ll. 54-62 (“[a]fter preparing the packet of data for transmission, the controller ... is arranged to hold the data packet for a random period of time .... In this way each of the [meters] is arranged to transmit at a random time.”). Creating random transmission times, as taught by Johnson, is different from the claimed grouping function.

As explained in prior responses, unlike Johnson, the claimed invention reduces “interference by controlling the number of meters that transmit at one time.” Spec., p. 13, ll. 17-18. Specifically,

the nodes [of the system] may be grouped together to form groups of nodes and the gateways may be grouped together to form sets of gateways. By selecting one node from each group of nodes, the selected nodes can be formed into a group of noninterfering nodes as is explained in detail below. Similarly, by selecting one gateway from each set of gateways, the selected gateways can be formed into a set of noninterfering gateways as also explained in detail below. (Spec., p. 11, ll. 15-21)

**A “group of noninterfering nodes” is expressly defined as:**

one in which: (a) no inbound transmission from any node in the group interferes with any inbound transmission from any other node in the group; and (b) no inbound transmission from any meter associated with any node in the group interferes with any inbound transmission from any meter associated with any other node in the group. (Spec., p. 11, ln. 31 – p. 12, ln. 3)

**Similarly, a “group of noninterfering gateways” is expressly defined as:**

one in which: (a) no inbound transmission from any node associated with any gateway in the group interferes with any inbound transmission from any node associated with any other gateway in the group; and (b) no inbound transmission from any meter associated with any node associated with any gateway in the group interferes with any transmission from any meter associated with any node associated with any other gateway in the group. (Spec. p. 12, ll. 18-23)

As the MPEP make clear, these **express definitions** in the specification must be considered in assessing the patentability of the claims. *See*, MPEP § 2106 (II) (C) (“[w]here an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim”) (citing, *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a “lexicographic vacuum, but in the context of the specification and drawings.”)).

Once groups of noninterfering nodes and groups of non-interfering gateways are identified in this manner, the server can send read commands sequentially to each group of non-interfering nodes or to each group of non-interfering gateways and receive meter data from a given group in a manner that ensures that transmissions from the nodes or gateways in that group will not interfere with each other. *See*, spec. at p. 11, ll. 22-30. In this regard, the applicants have added to claim 17 the function of “broadcasting a request for meter data *sequentially* to each group of non-interfering nodes.”

None of the cited references teaches or suggests defining “groups of noninterfering nodes” or “groups of noninterfering gateways,” **as those terms are expressly defined in the instant application**, nor do any of the references teach or suggest the newly recited feature of “broadcasting a request for meter data *sequentially* to each group of non-interfering nodes.” Consequently, the applicants submit that claim 17 patentably defines over the cited art. Inasmuch as the remaining claims depend from claim 17, they too patentably define over the cited art of the same reasons. Reconsideration of the Section 103(a) rejection of claims 17-22 is respectfully requested.

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**PATENT**

### **CONCLUSION**

For all the foregoing reasons, the applicants respectfully submit that the present application is now in condition for allowance.

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